Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte DENNIS PAUL LORAH and ROBERT VICTOR SLONE

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Appeal No. 2004-1900
Application No. 09/981,350

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ON BRIEF

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Before PAK, JEFFREY T. SMITH, and PAWLIKOWSKI, *Administrative Patent Judges*.

PAK, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1 through 6 which are all of the claims pending in the above-identified application.

APPEALED SUBJECT MATTER

According to appellants (Brief, page 3):

> As to the rejections applied against claims 1-6 under 35 USC [U.S.C. §] 103(a), it is appellants' intention for each ground of rejection that the rejected claims stand of fall together.

Therefore, for purposes of this appeal, we select claim 3, the broadest independent claim, from all of the claims on appeal and determine the propriety of the examiner's rejections based on this claim alone consistent with 37 CFR § 1.192(c)(7)(2003).[1]

Claim 3 is reproduced below:

> 3. An aqueous composition suitable for use when dry as an improved elastomeric coating, caulk, sealant, fabric treatment, or pressure sensitive adhesive comprising a predominantly acrylic aqueous emulsion polymer, said polymer having a glass transition temperature (Tg) from -90 °C to 20 °C formed by the free radical polymerization of at least one ethylenically unsaturated nonionic acrylic monomer and 0.75%, by weight based on the total weight of said polymer, ethylenically unsaturated acid monomer in the presence of 0.01-1.0%, by weight based on the total weight of said polymer, t-alkyl hydroperoxide, t-alkyl peroxide, or t-alkyl perester wherein the t-alkyl group includes at least 5 Carbon atoms and, optionally, at least one other oxidant.

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[1] *See In re McDaniel*, 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002)("If the brief fails to meet either requirement [of 37 CFR § 1.192(c)(7)(2001)], the Board is free to select a single claim from each group of claims subject to a common ground of rejection as representative of all claims in that group and to decide the appeal of that rejection based solely on the selected representative claim").

THE PRIOR ART

The examiner relies on the following prior art references:

Yang	5,824,734	Oct. 20, 1998
Yamauchi et al. (Yamauchi)	5,852,095	Dec. 22, 1998
Kirk et al. (Kirk)	6,335,404 B1	Jan. 1, 2002

Odian, *Principles of Polymerization*, p. 227 (2nd Ed., John Wiley & Sons, 1981).

THE REJECTIONS

Claims 1 through 6 stand rejected under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Yang, Kirk and Odian. Claims 1 through 6 stand rejected under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Yamauchi, Yang, Kirk and Odian.

OPINION

We have carefully reviewed the claims, specification and prior art, including all of the evidence and the arguments advanced by both the examiner and the appellants in support of their respective positions. This review has led us to conclude that the examiner's Section 103 rejections are well founded. Accordingly, we will sustain the examiner's Section 103 rejections for the reasons set forth in the Answer and below.

The appellants do not dispute the examiner's finding that Yang or Yamauchi discloses an aqueous composition comprising a predominantly acrylic aqueous emulsion polymer formed by the free

radical polymerization of the claimed amounts of the claimed monomers. Compare the Answer in its entirety with the Brief and the Reply Brief in their entirety. Nor do the appellants dispute the examiner's finding that the polymer formed in Yang or Yamauchi has the claimed glass transition temperature.[2] See the Answer, page 5, with the Brief and the Reply Brief in their entirety. The appellants only argue that one of ordinary skill in the art would not have been led to employ the claimed amount of the claimed free radical initiator in forming the emulsion polymer disclosed in Yang and/or Yamauchi. See the Brief and the Reply Brief in their entirety. According to claim 3, the free radical polymerization is carried out in the presence of 0.01 to 1.0 weight percent of t-alkyl hydroperoxide, t-alkyl peroxide, or t-alkyl perester (each alkyl representing at least five carbon atoms) as the free radical initiator.

The dispositive question is, therefore, whether it would have been obvious to employ the claimed amount of the claimed

[2] According to page 4 of the specification, the appellants also acknowledge that the claimed glass transition temperature is known to correspond to the monomers employed.

free radical initiator in forming the emulsion polymer disclosed in Yang and/or Yamauchi. On this record, we answer this question in the affirmative.

We find that both Yang and Yamauchi teach employing the claimed amount of peroxides or organic peroxides, inclusive of those claimed, as free radical initiators. See Yang, column 6, lines 18-40 and Yamauchi, column 12, lines 16-34. We find that both Yang and Yamauchi also identify t-butyl hydroperoxide as one of the peroxide or organic peroxide initiators (see Yang, column 6, line 31 and Yamauchi, column 12, line 25), with Yang actually using the claimed amount of t-butyl hydroperoxide as one of the initiators in its Examples 1, 3 and 5 (see Yang, columns 7, 8 and 9). Thus, we determine that one of ordinary skill in the art would have been led to a structurally similar initiator, such as an adjacent homolog of t-butyl hydroperoxide, encompassed by the claims on appeal, with a reasonable expectation of successfully forming the polymer taught or suggested by Yang or Yamauchi. As held in *In re Henze*, 181 F.2d 196, 201, 85 USPQ 261, 265 (CCPA 1950) and as explained in *In re Mills*, 281 F.2d 218, 222-23, 126 USPQ 513, 516-17 (CCPA 1960):

> [T]he nature of homologues and the close relationship the physical and chemical properties of one member of a series bears to adjacent member is such that a

> presumption of unpatentability arises against a claim directed to a composition of matter, the adjacent homologues of which is old in the art. The burden is on the applicant to rebut that presumption by a showing that the claimed compound *possesses* unobvious or unexpected beneficial properties not actually *possessed* by the prior art homologue.

In any event, we find that the expressions "peroxides" and "organic peroxides" used in Yang and Yamauchi, as explained by Kirk at column 6, lines 55-65, include a limited number of conventional peroxide initiators, including tertiary-amyl hydroperoxide (t-amyl hydroperoxide) encompassed by the claims on appeal. Thus, we agree with the examiner that one of ordinary skill in the art would have been led to employ organic peroxide initiators, such as t-amyl hydroperoxide, with a reasonable expectation of successfully forming the polymer taught or suggested by Yang or Yamauchi.[3]

Having determined that the examiner has established a *prima facie* case of obviousness, we look to any objective evidence relied upon by the appellants. However, the appellants do not refer to, much less rely on, any objective evidence which shows that the claimed initiators impart unobvious or unexpected

[3] Odian is cumulative with respect to the amount of initiator used for the reasons indicated *supra*. Odian teaches that the amount of initiator used is a result effective variable as it is known to affect the resulting polymer.

beneficial properties to the claimed composition relative to the prior art composition produced by t-butyl hydroperoxide initiator exemplified in Yang. See the Brief and the Reply Brief in their entirety.

Thus, on this record, we determine that the evidence of obviousness, on balance, outweighs the evidence of nonobviousness. Hence, we concur with the examiner that the claimed subject matter as a whole would have been obvious to one of ordinary skill in the art within the meaning of 35 U.S.C. § 103. Accordingly, we affirm the examiner's decision rejecting claims 1 through 6 under 35 U.S.C. § 103.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

CHUNG K. PAK Administrative Patent Judge	)	
JEFFREY T. SMITH Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
BEVERLY A. PAWLIKOWSKI Administrative Patent Judge	)	

CKP:hh

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